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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,484	06/25/2001	Tadashi Nishio	01375/LH	9126

1933 7590 08/11/2004

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER

FATAHI YAR, MAHMOUD

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/888,484

Applicant(s)

NISHIO ET AL.

Examiner

Mike Fatahiyar

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/25/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, line 7, the recitation "wherein imaginary projector positions" is vague and indefinite because it is not clear to what it refers. Correction and/or clarification is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Blanchard(5,902,030).

Blanchard disclose a multi-display apparatus comprising a screen(42), a plurality of projectors(86, 90), individual mirrors(112, 114) corresponding to the plurality of projectors and a common mirror(116) which all function as claimed. Note, the number of mirrors disposed on opposing sides(112, 114; 122, 124) are larger than the number of mirrors disposed centrally(116 and 126)(see figure 10B) and the images for at least two adjacent projectors are arranged so as to be partially overlapped with each other(column 3, lines 16-67 and column 4, lines 1-41).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard in view of Horiuchi et al(6,545,414 B2).

Blanchard is discussed above. Horiuchi et al is cited to show that the concept of utilizing a mercury lamp as a light source is old(column 6, lines 9-27). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of Blanchard with the noted teaching of Horiuchi et al such that to provide a mercury lamp for the projectors of Blanchard as a light source disposed so that the angle between the optical axis of the mercury lamp and the horizontal is 30 degrees or less because all projectors use some sort of light source and substitution of one type of a light source for another kind of light source is well within the realm of one of ordinary skill in the art. As to the "30 degrees or less" limitation such also would have been obvious to one of ordinary skill in the art because Blanchard shows various embodiments of his system wherein the projectors are disposed at various angles(see figures 4-7 and 10A-B).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Mizushima et al(5,988,817).

Mizushima et al disclose a multi-display apparatus comprising a screen(11), a plurality of projectors(1) arranged in at least two columns horizontally and at least two rows vertically(Fig. 1(f)), wherein the plurality of projectors corresponding to each column are placed on a single mount(9).

8. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakao et al(5,315,395).

Nakao et al disclose a multi-display apparatus comprising a frame section(14) having a screen(13), and a projector mounting section(20) having a plurality of projectors(23) for projecting images on the screen wherein the apparatus has a structure which can divide into two separate sections such as the frame section and the projector mounting section(see figures 1, 2, 5 and 13).

9. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard in view of Konuma et al(6,290,360 B1).

Blanchard is discussed above. Konuma et al is cited to that the concept of utilizing a housing, at least a projector, an exhaust duct and fan(28) having insulating material wherein the exhaust fan is positioned to face outside of the display apparatus and an air intake duct(47) which all function as claimed(see figures 2-6; column 3, lines 49-67; column 4, lines 1-19; column 5, lines 55-65; column 7, lines 57-65). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Blanchard with noted teaching of Konuma et al such that to provide a housing for the

projectors of Blanchard and cooling duct system such that it includes an exhaust duct having a heat insulating material, an exhaust fan positioned to face outside and an air intake duct because both systems are related to a display projection system and because it is desirable and conventional in the projection display environment to provide some sort of cooling system to dissipate the generated heat from each of the projectors.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanatani et al, Catta, Machtig et al, Negishi et al, Kepley et al, Gulick et al, Ono et al, and Firester et al are made of record to show various types of projection display systems utilizing reflecting mirrors.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mike Fatahiyar** whose telephone number is **(703) 305-6911**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

MF
M. Fatahiyar

August 8, 2004

[Signature] 8/9/04
RICHARD HERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600